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second recessed portion **551**. In some embodiment, sample holder **502** may also comprise a lower protective handle, such as lower prongs **501**. In some embodiment, upper prongs **591** and lower prongs **501** may be configured to improve handling of the sample holder **500** and help protect any protruding portion of absorbent unit **550**.

In some embodiment, paper spray cartridge **500** may include a high voltage source, such as a wire (not shown), for example, attached to the bottom of paper spray cartridge **500** (e.g., to the bottom of sample holder base **502**). In some embodiment, the high voltage source may be a wire (exemplified as wire **174** in FIG. **18**), metallic contact **534**, or both. For example, in some embodiments, metallic contact **534** may be a steel ball bearing.

Furthermore, in some embodiment, paper spray cartridge **500** may be separate parts (e.g., upper cover **590**, sample holder **504**, sample holder base **502**, etc.) that are configured to couple together. In some embodiments, this may allow for modularity of paper spray cartridge **500**, which may allow for each part to be formed by various low cost methods (e.g. injection molding). Thus, in some embodiment, the various parts of paper spray cartridge **500** may be configured to couple with each other (e.g., snap together) to form paper spray cartridge **500**.

While the invention(s) of this disclosure has(have) been described as having an exemplary design, the present inventions(s) of this disclosure may be further modified within the spirit and scope of this disclosure. This application is therefore intended to cover any variations, uses, or adaptations of the invention(s) of this disclosure using its general principles. Further, this application is intended to cover such departures from the present invention(s) of this disclosure as come within known or customary practice in the art to which this disclosure pertains.

Furthermore, the connecting lines shown in the various figures contained herein are intended to represent exemplary functional relationships and/or physical couplings between the various elements. It should be noted that many alternative or additional functional relationships or physical connections may be present in a practical system. However, the benefits, advantages, solutions to problems, and any elements that may cause any benefit, advantage, or solution to occur or become more pronounced are not to be construed as critical, required, or essential features or elements. The scope is accordingly to be limited by nothing other than the appended claims, in which reference to an element in the singular is not intended to mean "one and only one" unless explicitly so stated, but rather "one or more." Moreover, where a phrase similar to "at least one of A, B, or C" is used in the claims, it is intended that the phrase be interpreted to mean that A alone may be present in an embodiment, B alone may be present in an embodiment, C alone may be present in an embodiment, or that any combination of the elements A, B or C may be present in a single embodiment; for example, A and B, A and C, B and C, or A and B and C.

In the detailed description herein, references to "one embodiment," "an embodiment," "an example embodiment," etc., indicate that the embodiment described may include a particular feature, structure, or characteristic, but every embodiment may not necessarily include the particular feature, structure, or characteristic. Moreover, such phrases are not necessarily referring to the same embodiment. Further, when a particular feature, structure, or characteristic is described in connection with an embodiment, it is submitted that it is within the knowledge of one skilled in the art with the benefit of the present disclosure to affect such feature, structure, or characteristic in connection with

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some embodiments whether or not explicitly described. After reading the description, it will be apparent to one skilled in the relevant art(s) how to implement the disclosure in alternative embodiments.

Furthermore, no element, component, or method step in the present disclosure is intended to be dedicated to the public regardless of whether the element, component, or method step is explicitly recited in the claims. No claim element herein is to be construed under the provisions of 35 U.S.C. § 112(f), unless the element is expressly recited using the phrase "means for." As used herein, the terms "comprises," "comprising," or any other variation thereof, are intended to cover a non-exclusive inclusion, such that a process, method, article, or apparatus that comprises a list of elements does not include only those elements but may include other elements not expressly listed or inherent to such process, method, article, or apparatus.

As well, while the novel technology was illustrated using specific examples, theoretical arguments, accounts, and illustrations, these illustrations and the accompanying discussion should by no means be interpreted as limiting the technology. All patents, patent applications, and references to texts, scientific treatises, publications, and the like referenced in this application are incorporated herein by reference in their entirety.

What is claimed is:

1. A mass spectrometry cartridge comprising:

a sample holder;

a base;

a solid phase extraction column, wherein the solid phase extraction column is disposed within the sample holder; and

a first absorbent unit, wherein the first absorbent unit is configured for use with a mass spectrometer.

2. The mass spectrometry cartridge according to claim 1, further comprising a second absorbent unit disposed within the base.

3. The mass spectrometry cartridge according to claim 2, wherein the sample holder is slidably disposable within the base.

4. The mass spectrometry cartridge according to claim 3, wherein the sample holder is slidably disposable between a first extraction position, in which the solid phase extraction column is disposed above the second absorbent unit, and a second elution position, in which the solid phase extraction column is disposed above the first absorbent unit.

5. The mass spectrometry cartridge according to claim 1, wherein the sample holder is slidably disposable within the base.

6. The mass spectrometry cartridge according to claim 1, further comprising a cover, wherein the cover is disposed above the solid phase extraction column.

7. The mass spectrometry cartridge according to claim 1, wherein the solid phase extraction column is configured for at least one sample selected from the group consisting of: blood, plasma, urine, bile, water, liquid foodstuffs, and mixtures thereof.

8. The mass spectrometry cartridge according to claim 1, wherein the base is configured to allow an electrical potential to reach the first absorbent unit.

9. The mass spectrometry cartridge according to claim 8, wherein the base comprises a wire.

10. The mass spectrometry cartridge according to claim 9, wherein the sample holder comprises a metallic contact.

11. The mass spectrometry cartridge according to claim 10, wherein the metallic contact is configured to allow an electrical potential to reach the base.